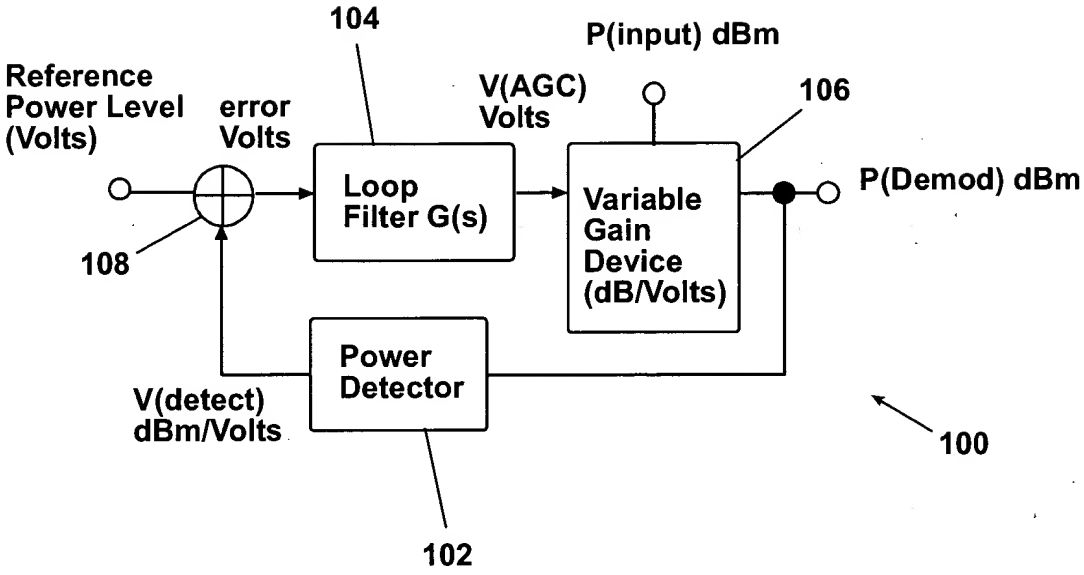

104
P(input) dBm
Reference
Power Level
(Volts)
error
Volts
V(AGC)
Volts
106
Loop
Filter G(s)
Variable
Gain
Device
(dB/Volts)
P(Demod) dBm
108
Power
Detector
V(detect)
dBm/Volts
100
102

Fig. 1

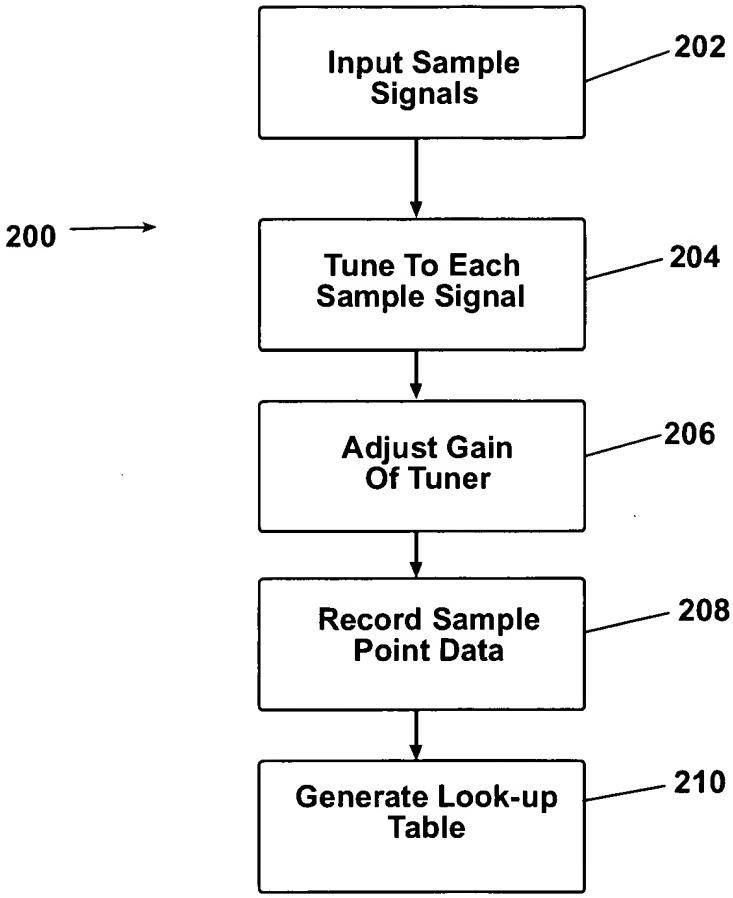
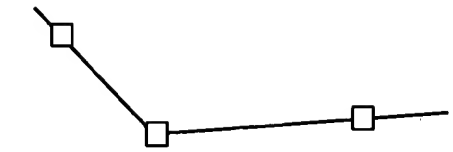

200
Input Sample Signals
202
Tune To Each Sample Signal
204
Adjust Gain Of Tuner
206
Record Sample Point Data
208
Generate Look-up Table
210

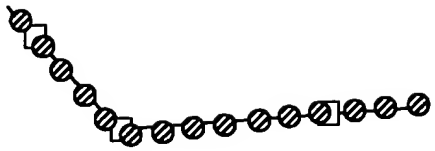
Fig. 2



Calibration
Amplitude Points Na_cal

Pin (dBm)

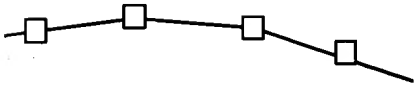
Fig. 3A



Interpolated
Amplitude Points, Na

Pin (dBm)

Fig. 3B

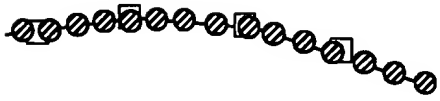


Pin=PI

Calibration
Frequency Points Nf_cal

Frequency (Hz)

Fig. 4A



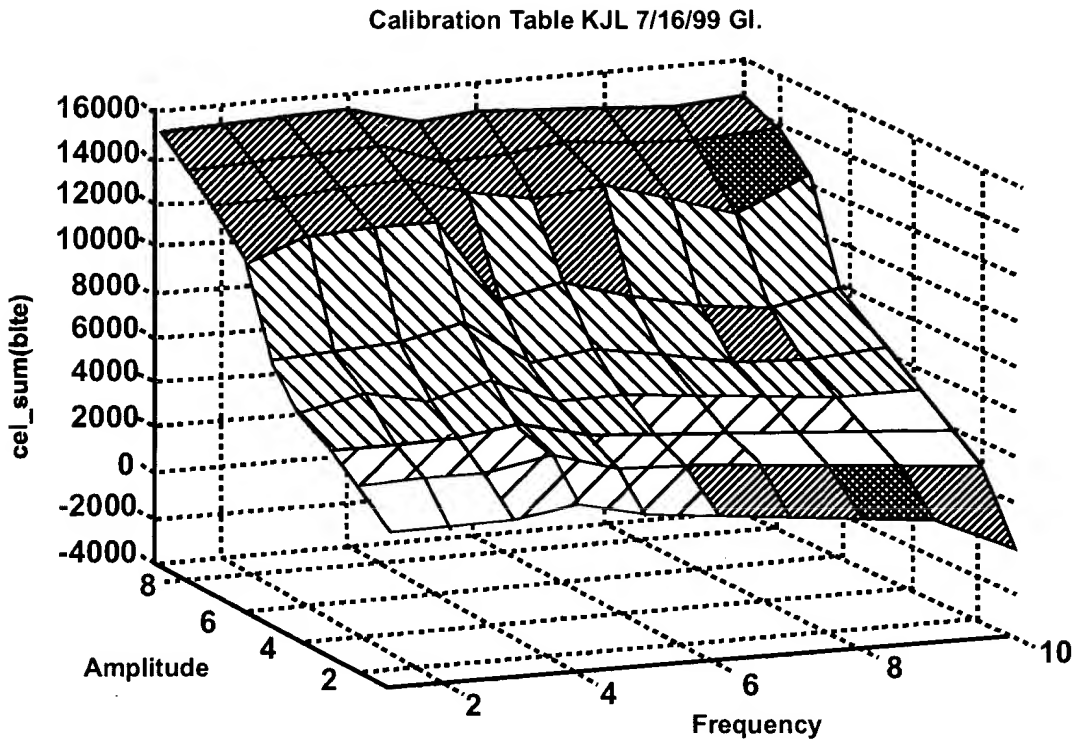
Pin=PI

Interpolated
Frequency Points, Nf

Frequency (Hz)

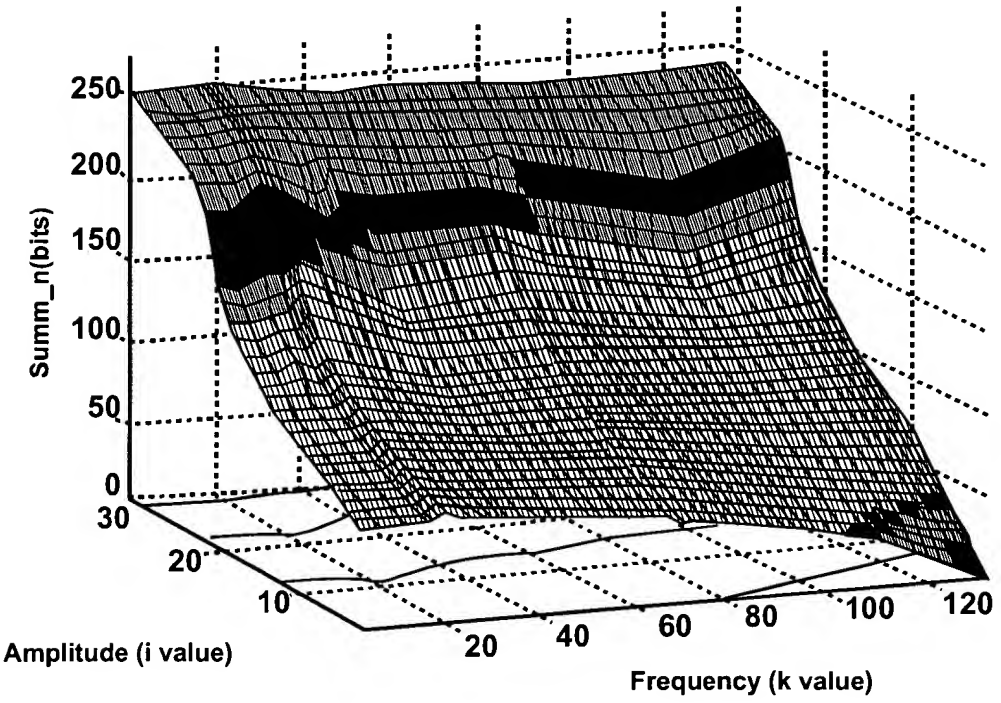
Fig. 4B

0999999.0999



Calibration Table, Na_cal=9, Nf_cal=10

Fig. 5



Cable Modem Implementation of Look-Up-Table Na=31, Nf=134

Fig. 6